



REMARKS

Favorable reconsideration of this application, in light of the personal interview conducted on July 14, 2006, and the following discussion, is respectfully requested. Claims 1-68 and 113-114 are now under consideration in this application and claims 104-111 stand withdrawn. Applicants below present a summary of the substance of the interview along with arguments concerning the patentability of all the pending claims.

Substance of the Interview

Applicants greatly appreciate the personal Examiner's Interview conducted with Applicant's undersigned representative on July 14, 2006, the proceedings of which are reflected in part by the Interview Summary mailed July 25, 2006. Pursuant to MPEP § 713.04, Applicants now provide the following substance of the interview.

Applicants explained that the cited references failed to teach or suggest an embossing system wherein at least a portion of the perforate nips are substantially oriented in the cross-machine direction. More specifically, Applicants explained that, unlike machine direction embossments, cross-machine direction embossments may be impacted by circumferential drift which can lead to severe damage to the embossing rolls and the sheet. Circumferential drift occurs when the alignment of the embossing rolls drifts in the machine direction.

With respect to Hepford et al., Applicants noted that the reference discloses employing embossments aligned only in the machine direction. Applicants further explained that the Hepford et al. passage below discloses the advantage of increased

stretch in the cross-machine direction that results from those machine direction embossments:

Perforating the webs increases flexibility or softness of the web and also increases extensibility of the web, an advantage which is particularly useful when it is in the cross-machine direction of the web. U.S. Pat. No. Re 27,453, which is hereby incorporated by reference into the specification, discloses advantages of perforating the web in this manner.

Col. 4, lines 32-38. Applicants provided support for this interpretation from the citation for the pronoun "it" found in Fowler's Modern English Usage, 3rd Edition (1996) (attached as Exhibit A), which reveals that "it" in the above passage should properly refer to the advantage of increased extensibility in the cross-machine direction and not to any advantage of cross-machine direction perforations.

In light of the above passage's reference to U.S. Patent No. Re: 27,453 to Schutte et al. disclosing the advantages of machine direction perforations, Applicants further noted that the reference, as explained in the passage below, discloses only the advantages of machine direction perforations while noting the supposed shortcomings associated with cross-machine direction perforations:

The areas **26** or **32** may be of any shape desired but it is preferred that they be generally elongated and relatively small and extend generally in a machine-direction and across a plurality of crepes or folds of the creped base-stock. If the slits are disposed in machine-direction the cross-machine stretch of the paper is increased and a highly desirable structure having two-way stretch is produced. However, in paper having this structure the cross-machine tensile strength is somewhat reduced. If the areas **26** or **32** are disposed in a cross-machine direction, the cross-machine strength is increased but such structure has very little cross-machine stretch.

As such, Schutte et al. states that a sheet with machine direction perforations produces "a highly desirable structure having two-way stretch" while a sheet having cross-machine direction perforations produces a structure that "has very little cross-machine stretch." Applicants explained that those passages clearly show that Hepford et al. discloses and suggests only machine direction perforations, incorporating Schutte et al. to explain the advantages of machine direction perforations.

Applicants further noted that the variations disclosed in an additional Hepford et al. passage do not contemplate the presence of cross-machine direction perforations:

The preferred forms of the invention have been described, but it should be recognized that variations may be practiced with many of the advantages of the preferred forms. One example is the use of knuckles which contact only one knuckle on the other embossing roll, joining the webs only on one side of the crests. Another example is the use of knuckles on one embossing roll which do not taper outwardly, joining the edge of the crests of one web to areas on the other web intermediate the crests and depressions. And another example is the use of an adhesive to replace or supplement the mechanical welding of the web. Also, one or more additional webs could be passed through the embossing rolls either along with the first or second webs through the nip formed by a press roll or by avoiding the press rolls.

Col. 6, lines 16-31. None of those variations disclosed by Hepford et al. disclose or suggest any cross-machine direction perforations, further illustrating that the reference simply does not contemplate the structures claimed in the present application.

Finally, Applicants noted that Schutte et al disclosed that smooth rolls wrapped with a wire screen were "satisfactory" for embossing the sheet. Applicants explained

that such rolls, while suitable for creating machine direction embossments, are not practical for embossing a sheet in the cross-machine direction due to the potentially serious damage that could occur to the embossing rolls and the sheet due to circumferential drift.

The Examiner agreed that Hepford et al. disclosed only machine direction perforations and that Schutte et al. would not have motivated the skilled artisan to modify Hepford et al. to arrange the perforations in the cross-machine direction. The Examiner also indicated that, before the claims would be allowed, the Examiner needed to conduct an additional search for prior art that issued since the last search was conducted; however, Applicants did not need to submit a Request for Continued Examination for that search and the proper consideration of the arguments made during the interview and in this paper.

Once again, Applicants greatly appreciate the Examiner's time and participation in the personal interview. Should the Office disagree with Applicants presentation of the substance of the interview, or if Applicants have misunderstood any of the Examiner's statements, Applicants respectfully request that the Office contact the undersigned representative immediately to discuss an appropriate resolution.

Rejections Under 35 U.S.C. § 103

The Office rejected claims 1-4, 7-9, 15, 26-27, 30-32, 38, 48, 52, 55-57, and 63 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,940,529 to Hepford et al. in view of U.S. Patent No. RE 27,453 to Schutte et al. See Final Office Action at page 2. The Office has maintained the rejection for substantially the same reasons as set forth

in the Office Action mailed on November 2, 2005. More specifically, the Office states that Hepford et al. discloses a perforate embossing system with embossing elements that can be arranged in the cross-machine direction, and that Hepford et al. relies in part on Schutte et al. to show that the perforating embossing elements can be arranged in the cross-machine direction. *See id.* at pages 2-3. More specifically, the Office asserts that the figures in Schutte et al. show embossing elements oriented in the cross-machine direction; therefore, it would have been obvious to the skilled artisan to arrange at least some of the embossing elements of Hepford et al. in the cross-machine direction. *See id.* at page 3. The Office further asserts that, because Hepford et al. shows all of the embossing elements oriented in one direction, it would have been obvious to the skilled artisan to arrange all of the embossing elements in the cross-machine direction. *See id.*

The Office rejected claims 5-6, 10-14, 16-25, 28-29, 33-37, 39-47, 49-51, 53-54, 58-62, 64-68, and 113-114 under 35 U.S.C. § 103(a) as obvious over Hepford et al. in view of Schutte et al. and further in view of U.S. Patent No. 4,759,967 to Bauernfeind. See Final Office Action at page 4. The Office states that Bauernfeind teaches the desirability of having substantially all of the embossing elements oriented in the cross-machine direction. *See id.* The Office admits that neither Hepford et al. nor Schutte et al. disclose the claimed shapes, heights, sidewall angles, and engagement lengths of the embossing elements, but states that Bauernfeind expressly teaches those limitations or that those limitations would have been obvious to the skilled artisan depending on the web being embossed. *See id.*

The Office separately rejected dependent claim 113 under 35 U.S.C. § 103(a) as obvious over Hepford et al. in view of Schutte et al. and further in view of U.S. Patent No. 5,458,950 to Bredenick et al. See Office Action at page 5. The Office states that Bredenick et al. teaches two portions of embossing elements having different heights of at least 15 mils to create a balance between web strength and web absorbency, and that it would have been obvious to modify the web of Hepford et al. to have the different embossing element heights for the same reasons. *See id.*

For at least those reasons set forth above in the Substance of the Interview and as discussed further below, Applicants respectfully disagree and traverse the Office's rejections. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must have been some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, for the skilled artisan to have modified the reference or to combine references' teachings. Second, the skilled artisan must have had a reasonable expectation of success in making the proposed modification or combination. Finally, the prior art reference or references must teach or suggest all of the claim limitations. See MPEP § 2143.

With those criteria in mind, Applicants assert that the skilled artisan would not have been motivated to combine the teachings of Hepford et al. and Schutte et al. to achieve the claimed invention which comprises at least a portion of perforate nips substantially oriented in the cross-machine direction. As Applicants have explained above in the Substance of the Interview and in the previous response dated February 2, 2006, Hepford et al. discloses embossing elements arranged only in the machine

direction and incorporates Schutte et al. to show the advantage of cross-machine direction extensibility and the highly desirable product having two-way stretch that results from machine direction perforations. As noted in the Interview Summary, the Examiner agreed that the disclosures of Hepford et al. and Schutte et al. would not have been sufficient to motivate the skilled artisan to modify the invention of Hepford et al. to provide cross-machine direction perforations. None of the remaining cited references—Mittman, Dannheim et al., and Kroeper—disclose perforations that are substantially oriented in the cross-machine direction and, thus, do not remedy the deficiencies of Hepford et al and Schutte et al. As such, the cited references cannot support a *prima facie* case of obviousness and Applicants respectfully request the withdrawal of the rejections.

Conclusion

Applicants submit that the pending claims are neither anticipated nor rendered obvious by any of the references of record. In view of the foregoing remarks, Applicants respectfully request the reconsideration and the continued examination of this application and the timely allowance of the pending claims.

Should the Office continue to reject the pending claims or have any questions regarding this application or this Response, Applicants invite the Office to contact the undersigned representative at 202-408-4040 to discuss an appropriate resolution.

Respectfully submitted,

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